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A Brief History of the Indian Hunter

By

JOHN WITTHOFT

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Wooly Mammoth—from an original oil painting by Chas. R. Knight

A Brief History of the Indian Hunter

By John Witthoft

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THE Indian had lived in Pennsylvania for long ages before the white man arrived, but he wrote no books and kept no records. His whole history has been entirely a matter of conjecture until very recent years. Indian history from the historian's viewpoint is the sparse record of events that involved Indians during the frontier period, a matter of very slight importance compared to the great total of earlier human experience in the new world. A new and revolutionary type of history is the product of archeology, which deciphers the records of ancient human life, the lost tools, refuse, and signs of habitation which man unconsciously and necessarily leaves behind him. Archeological history needs no written documents, and is hence not restricted to a tiny fragment of past human activity.

In earlier articles in this magazine, I sketched what we know of the Indian hunter as our forefathers saw him, with information drawn from ethnology. In this article, I will outline what we know, from archeological research, about his life in still earlier times. We are primarily concerned here with such questions as: how long ago did Indian hunters course our landscape, what hunting tools did they use, how did their ways of life, their tools, and the types of game change, and what sort of men were they? I shall not here attempt to explain the way in which Indian remains and relics are studied, how we collect and interpret our data, or the precise evidence for each statement, since these are very elaborate topics indeed, and would take an impossible amount of space and time. Instead, I shall try to picture the man and his ways, and to outline his progress in the arts of life, and his gradual development of some of the tools and institutions of primitive civilization.

Man of the Forest

First, let us look at the man himself, as we know him from the grave where his family laid him to his last rest. At all times for which we have skeletal material, we can see the same sort of man, of the same build, features, general appearance, and racial type. Even our earliest skeletal material from the Northeast, slightly more than five thousand years old, represents Indians like those of the colonial frontier, and like some of the surviving people on our reservations today. During the past five thousand years, the Indians of our local area changed very little, and represent continued survival of very ancient settlers. Earlier than this we have no skeletal material from any part of the Americas; we do not yet know much about the Indian of still earlier times, who is represented only by his tools.

The Indian of our eastern forests was a small man, almost never more than five feet, five inches tall. He was of very slight build, and probably rarely weighed more than a hundred and thirty pounds. His bones are especially light and delicate as compared to almost all other human types, and delicate modeling of the facial bones and thinness of the skull bones is conspicuous in Indian skeletons. Despite this, he was almost always an exceedingly muscular man, as is indicated by the form of those

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ABOUT THE AUTHOR

In a very popular series of three articles published by GAME NEWS *in 1953, State Anthropologist John Witthoft discussed the American Indian as a hunter. This article, first in a series of three, outlines what is known about Indian life in still earlier times. Mr. Witthoft is a nationally recognized authority on the American Indian and has been employed by the Pennsylvania State Museum since 1948.*

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Paleo-Indian Epoch	18,000 to 8,000 Years Ago	Hunters of Big Game Animals of Extinct Types
Archaic Epoch	8,000 to 3,000 Years Ago	Hunters of Small Game and of Wild Plant Foods
Woodland Epoch	3,000 to 400 Years Ago	Farmers, Fishermen and Hunters

"Three Great Ages of Pennsylvania Indian History"

parts of his bones which were at the ends of muscle-bundles. All evidence from the skeletons suggests that the Indian was wiry, strong, and extremely tough. He was fullfaced as compared to ourselves, with jutting cheek bones and a large, well developed palate and dental arch. Despite this, his teeth were quite as bad as ours, were subject to the same decay and diseases, and to much more wear; he had ordinarily lost all but a few of them before he was thirty-five years old. He did not chew the way we do, but was used to tough fare and bit with his incisors edge-to-edge grinding with both his front teeth and molars. Eskimo still chew this way, because they still live on such a tough diet. Our Indian hunter scarcely ever lived to be forty years old, and usually died before he was thirty-five. Probably his diseased teeth and the effects of the infections they caused were a prelude to death. Hunger, exposure, and hunting accidents were probably the other major causes of early death. Various arthritic and rheumatoid diseases were remarkably frequent and often severe, judging by evidence of the skeletons. The Indian was a tough, wiry little man who carried many physical defects and who was constantly exposed to the worst rigors of our climate. He slept curled into a ball, with his knees under his chin, a habit acquired during a lifelong struggle against a cold and brutal natural world. He was a man who lived very hard and died young. This is not the Indian of our romantic literature, but it is most certainly the Indian whose bones we study.

The Ages of New World Man

In my earlier articles, *The American Indian—Hunter,* I described the way of life of the aboriginal hunter as we see it through behavior and belief that have survived until modern times. This was the latest and

most highly developed civilization of the local Indian world, but it is only one stage in a long history. Conditions of life and ways of doing things were no more static for the Indian than they were for other peoples, and archeology is our only way of discovering and understanding the long development of Indian life and technology. At the present time, we recognize Indian history as having gone through many stages, and have outlined these under convenient labels in both major and lesser divisions. The total of our Indian history is divided into three long ages, called epochs, and these are in turn divided into periods, which are in turn subdivided in several ways. In this article I shall be concerned only with the major divisions, epochs and periods, and with the hunting tools, game animals, and general way of life during each.

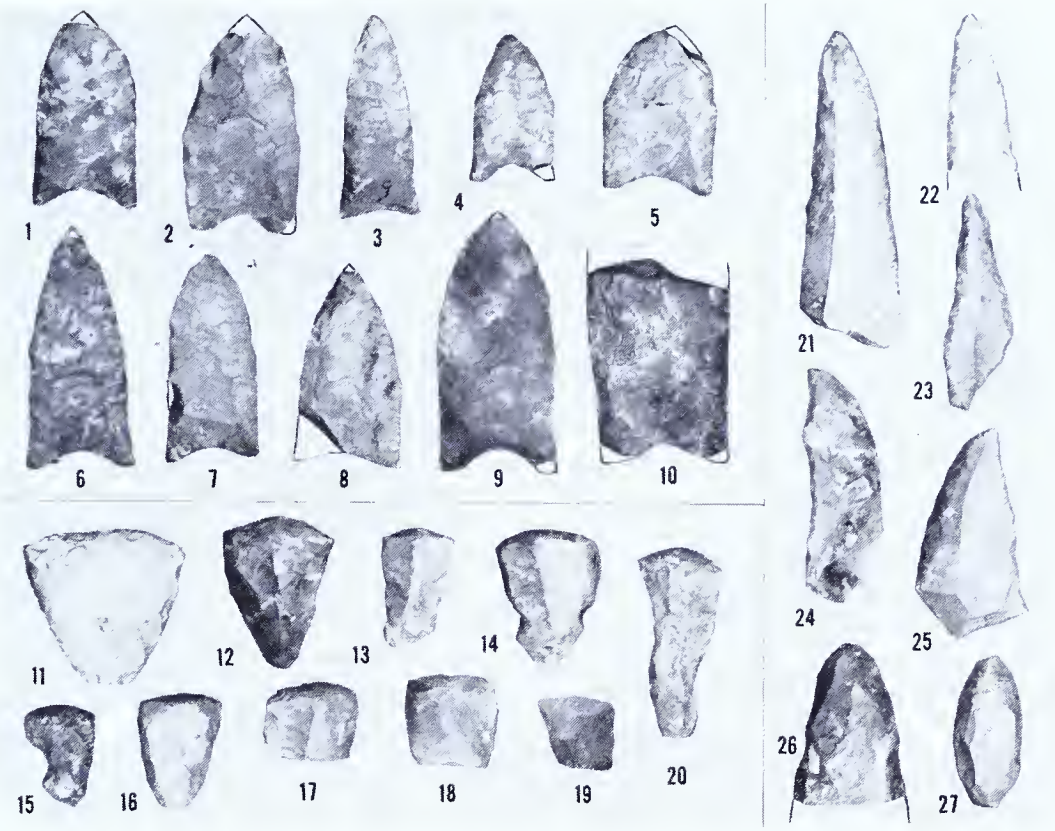
The Paleo-Indian Epoch began more than twelve thousand years ago, probably nearly eighteen thousand years ago, and ended perhaps eight thousand years ago. We have no idea what man of Paleo-Indian times looked like. He chipped all of his tools from flint, using no other stone and never shaping a tool by battering or grinding. He lived here when the climate was very different than it is now, and when the vegetation on the land was different. He lived entirely by hunting, and he killed animals which are entirely extinct and which, in fact, did not survive into later epochs of Indian history.

The Archaic Epoch began about eight thousand years ago and lasted until about three thousand years ago. Archaic man is well-known from his graves, and was an Indian of the same general appearance as those known to our white ancestors. He made some of his tools by chipping, but he also used other stones besides flint, and he formed many of his tools by battering and grinding them into shape. He hunted animals of species which still exist in the woods about us, but he did not live entirely by hunting; he collected many wild edible plants and had begun to supplement his meat and vegetable diet by fishing. In the Northeast, he did not yet eat shellfish, although he did depend upon such food at times in other areas, such as Florida and the Mississippi Valley. He did no farming and made no pottery cooking-vessels, apparently roasting his meat. Neither had he begun to cultivate and smoke tobacco.

The Woodland Epoch began about three thousand years ago and ended when Indians fled beyond the frontier of white settlement or adapted the ways of the White man. The Woodland Indians lived by farming, hunting, fishing, gathering wild food plants, and digging shell-fish. They made pottery vessels and seem to have usually preferred to boil their foods into soups and stews. They built permanent houses, and lived among their cultivated fields in little villages or individual farmsteads. Before this time, the women and children had followed the men from camp to camp after the game. In Woodland times the household stayed in one habitation and the men traveled to the game, often for great distances, while the women stayed at home and tended their gardens.

The First Settlers

Daniel Boone may have thought he was the first human to set foot on some of the wilderness of Kentucky, but I doubt he believed this, for it charges him with two points of ignorance; namely, that he had no knowledge of other illiterate borderers who had preceded him, and that he did not consider the Indian to be human. Actually, Kentucky had been a dark and bloody ground years before, in Indian wars that Boone and other whites had never heard of. It was an ancient and well-known part of Indian geography, as vener-



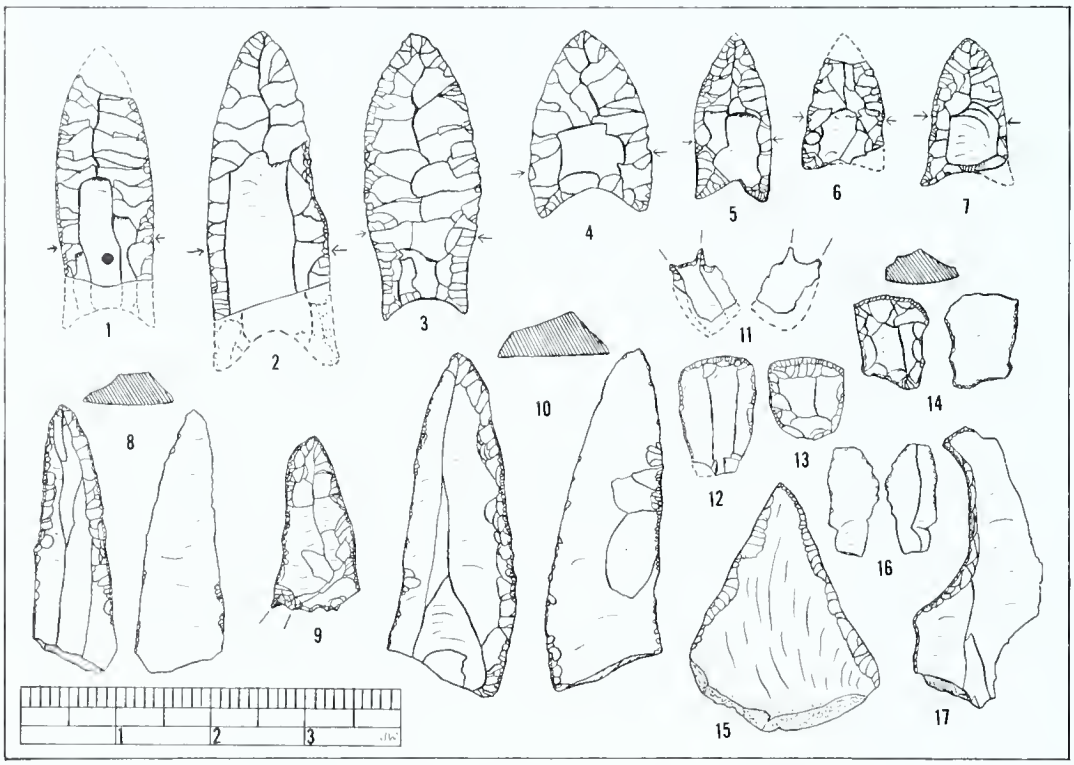
PENNSYLVANIA'S EARLIEST TOOLS; FLINTS FROM THE SHOOP SITE IN DAUPHIN COUNTY

Nos. 1-10 are fluted spearpoints; nos. 11-20 are end scrapers or planing tools; nos. 21-27 are side scrapers or butchering and skinning tools. Nos. 9-10 were chipped from brown jasper which came from the South Mountain in eastern Pennsylvania; the rest are of Onondaga chert of the particular phase which outcrops between Rochester and Buffalo, New York. All of the photographs are half natural size.

able and wrapped in Indian tradition and mystery as the white man's Ninevah. The new world was new only to European literature; in the annals of man, it must be listed as an ancient world indeed, silent witness to more than fifteen thousand years of human achievement, fulfillment, and tragedy, for ages before the drug trade and dreams of feudal wealth brought Columbus to the summer islands. The history of books and documents may have satisfied our forefathers, and given them great comfort in matters of ego; nevertheless, the real history of human affairs is no mere chronicle of "pen and paper work," but a noble tale of the blood, seed, and works of humanity at large. So let us forget Columbus, Boone, and the other shadows of our textbooks, and see how much we can discover of the ways and times of the real explorers and venturers, the men and women who carried the human stock into all parts of the world in ancient and unrecorded times.

There are two histories of exploration; the only one we ordinarily consider is a fragment of the history of the growth of European knowledge, a history of voyages, maps, descriptions, and conceits. As a matter of fact, everywhere that the first European explorers traveled in the parts of the world which were new to them, they ate the food, accepted the hospitality, followed the travel directions, and abused the women

and good graces of people already living in those parts. Exploration in the age of Columbus was like setting out to cross France with a full wallet and a large bodyguard. However, the epics of the lives of primitives (those odd people whom our ancestors considered animals, although they fathered many a child upon them), if they ever be written, include very different types of explorations. Ten thousand years ago, the world was full of humans; men of completely modern appearance, but with primitive tools and techniques, had penetrated to every habitable corner of Asia and Africa, Australia and Tasmania, North and South America. Since that time, there have been only two new human penetrations into any large part of the lands of this world, only two entries into regions where no one lived and man had never tread before. The first of these was the discovery of the far-flung islands of the Pacific by the Polynesians, whose desperate sailing voyages on the open seas had taken them to every island of any importance before 1300 A. D. They filled the last great void in our world which was available to human settlement. The other new land is Antarctica, which will not support human life and which was first touched by men within the past century. The Arctic was not such a new world; everywhere in the northern



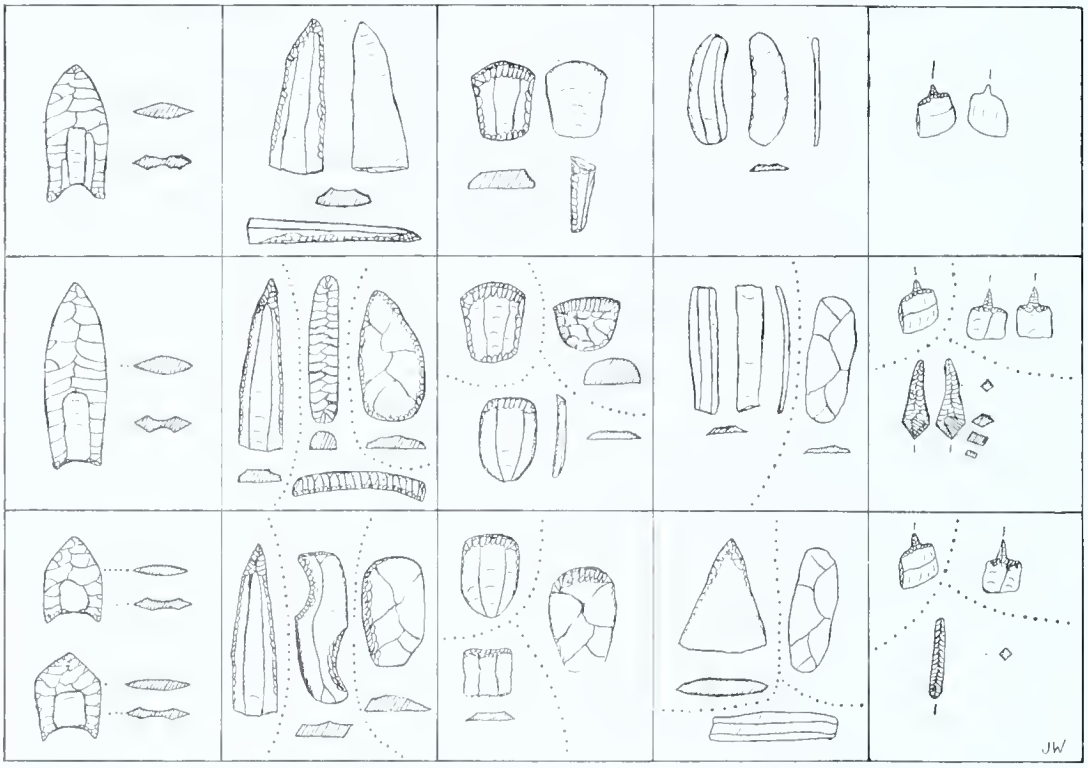
Flint tools of the Paleo-Indian epoch, 8,000-16,000 years old. Fluted spearpoints, 1-7; side scrapers, 8-10; gravers, 9 and 11; end scrapers, 12-14; knives, 15, 16; spokeshave or shaft scraper, 17. 1 is of blue-green flint and was found near Pittsburgh; 2 is a composite drawing of two broken, uncataloged specimens found near Highspire, Dauphin Co.; both are of whitish chert, and resemble the fluted points found at Clovis, New Mexico. 3 is of Pennsylvania jasper, very much rotted, from the Wyoming Valley; 4 is a white chert fluted point found in northeastern Lancaster Co.; 5, 8, 9, 11, 13, 14, and 16 are from the Shoop Site in Dauphin Co., and are made of Onondaga Chert from western New York; 11 is an engraving tool, and the lines point to the cutting points. 6, 7, 10, 12, 15 and 17 are from the Whilhelm Site in Lebanon Co., are all made of Pennsylvania jasper and are in the collection of Sam S. Farver at Palmyra.

regions, the evidence of archeology indicates that Eskimo had long preceded whites in exploration of every bit of land and even of vast northern ice flows, and that Eskimo had long lived on arctic lands where the white explorer could scarcely survive with imported supplies. The most southern parts of South America were occupied by Indians ten thousand years ago, and their forefathers had come to there from Asia by way of North America, Alaska, and Siberia. Where does this leave Columbus and the discovery of the "New World," except as the approach of a vanguard of Spanish armies?

Paleo-Indian Man

The earliest settlers in North America are best-known from sites at Clovis, New Mexico; Miami, Texas; the Shoop Site in Dauphin County, Pennsylvania; and a few less extensive remains. All of our evidence about the animals they hunted comes from the western sites; the largest part of our information about their tools comes from Pennsylvania, although their spearpoints have been found and studied in all parts of North America. They lived here during some of the warmer stages of late glacial times, probably living at the sites I have mentioned about fifteen thousand years ago. They hunted with stabbing spears or lances, tipped with very delicately-made and easily-recognizable flint tips, and their favorite game animals were elephants, the extinct American mammoth and his relatives. As a matter of fact, no animal bone except that of several species of elephant has yet been found in the sites that have been excavated, although other animals must have been eaten. Apparently our first hunters preferred a large family-sized meat package when they could get it, and they probably were the agents who exterminated the American pachyderms. These people were not numerous, and they moved rapidly over the countryside in pursuit of game, so that the sites where they camped are small, hard to find, and do not have relics in any abundance. They made and used only a few kinds of tools, and these are quite different than those made by later Indians.

The most distinctive tool of the Early Paleo-Indian Period is the fluted spearpoint. It is slender, fairly thick and heavy, two to four inches long, of simple shape without stem or tang, and it has had a groove carefully chipped on each face. This groove was formed to grip the split shaft of the spear very firmly, so that the point could be glued and lashed very securely to the lance. Hunters of big game cannot take chances on a lance tip coming loose or twisting on its shaft in use, and the grooves were an important feature in the manufacture of a rigid lance. Their commonest tool was a planing blade or "end-scraper," with a beveled shaving edge at one end, probably used in shaping tools of wood and bone. The other ordinary tools were long side-scrapers with beveled edges tapering to a point, probably used in skinning game and tanning hides, and long, parallel-edged slivers of flint which were used as knives, probably in butchering. The only other tools found at the Shoop Site in Pennsylvania are chips with little points shaped on the edge; these were probably used in working bone, especially the manufacture of bone needles. All of these objects, which represent the total tool-kit which has survived decay, are chipped from flint, and none are made of other stones or formed by any other technique than chipping. These cutting and scraping tools are very much like those of later stages of the Old Stone Age in Europe and western Asia. They are especially like tools of a somewhat earlier period from the great grass-



CHANGES IN FLINT TOOLS DURING THE PALEO-INDIAN EPOCH

Idealized sketches of the major tools types from three stages of the Paleo-Indian Epoch. Top row are tools of the Early Paleo-Indian Period, based on data from the Shoop Site at Enterline, Dauphin Co., Pa. Middle row are tools of the Middle Paleo-Indian Period, based on data from the Bull Brook Site at Ipswich, Mass. Bottom row are tools from the Late Paleo-Indian Period, based on data from the Wilhelm Site in Lebanon Co., Pa., the Reagan Site at St. Albans, Vermont, and the Lindenmeier Site in Colorado.

The first column (left) are fluted spearpoints. The second column are side scrapers, used as skinning tools and spokeshaves. The third column are end scrapers, used as planing tools in shaping wood. The fourth column are knives. The fifth column are engraving tools or perforating tools and drills. Drawings not separated by a line are different views and sections of the same tool. Cross-sections are lined. The actual specimens are about five times as large as the drawings.

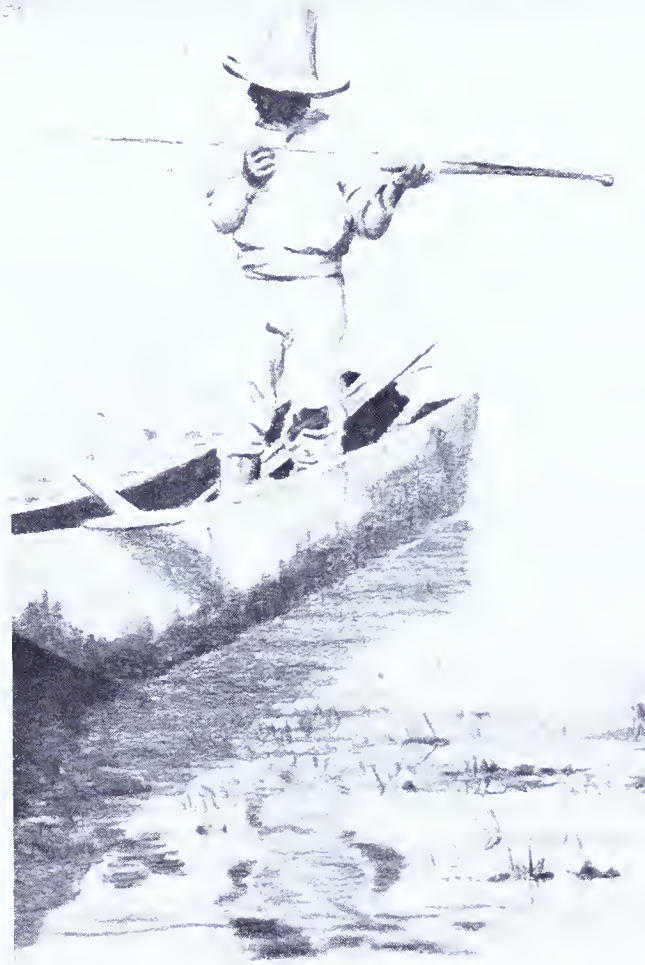
lands of the Ukraine, where ancient men also depended upon the mammoth for a livelihood. As far as we knew, they are the only record available of the earliest Pennsylvanians, and there are several reasons for believing that they are relics of the first settlement of this region.

Later Paleo-Indian cultures, both of Middle and Late periods, are known in the West and in other parts of the East, but only scattered traces of them have been found in Pennsylvania. The Folsom spearpoint, a small fluted point which has been studied most extensively at the Lindenmeier Site in Colorado, is the most widely publicized of these later tools, and is about ten thousand years old, by no means as ancient as many of the fluted spearpoints. Folsom points are not found in Pennsylvania, but certain smaller types of fluted spearpoints are here believed to be of about the same age. One of the most important projects of eastern archeology at the present time is the discovery and study of more of the places where Paleo-Indian peoples lived and left their tools and debris, and our studies of the ways of life in these ancient times have only begun in the last few years.

A Brief History of the Indian Hunter

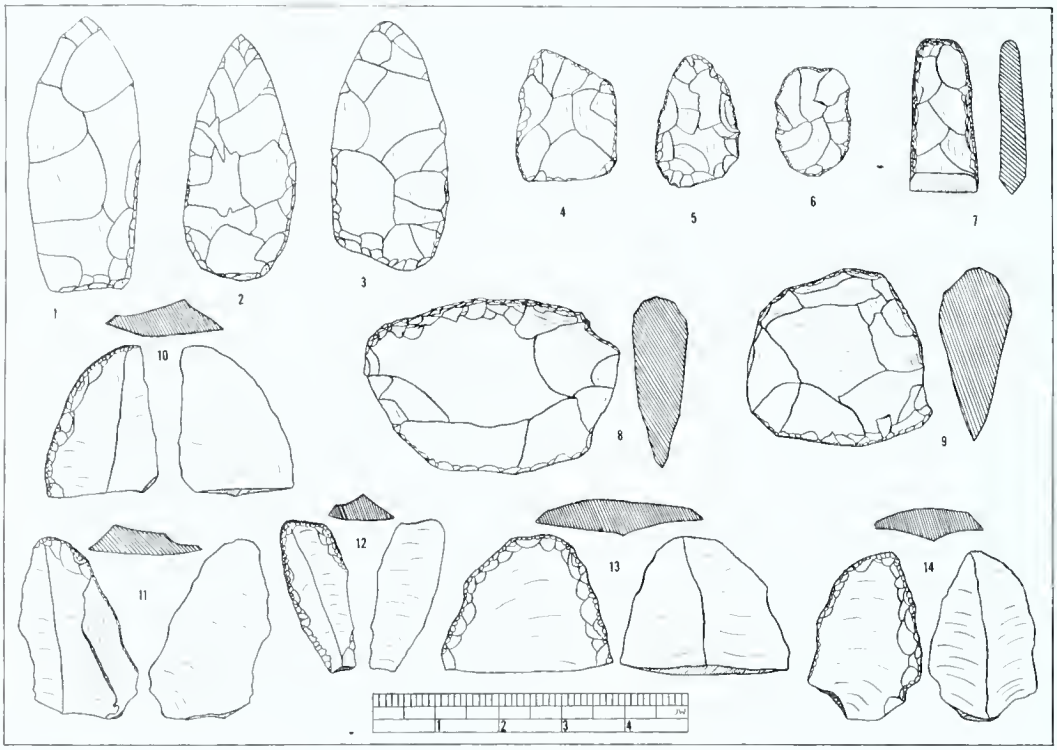
PART II
ARCHAIC MAN

By John Witthoft



Spearthrowers, characteristic weapon of Archaic Indians, is still in use today among the Eskimo and Australia aborigines. The drawing illustrates the method used in throwing the light spear.

MAN of the Archaic Epoch hunted the animals which still exist, and he apparently could not make ends meet or keep his belly full by the game he took with his spear. Thus the earliest Archaic cultures which have been found in New York and in the West represent people who often lived on plant foods, especially porridge made from acorn-flour and meal from other seeds. The great changes in American life which characterized the Archaic Epoch were: greater dependence on foods which did not come from hunting, especially plant foods; abundance of stone grinding tools which were used to make flour from seeds; the everyday manufacture of tools from non-flinty stones by battering and grinding techniques (which did not replace flint-chipping, but were used along with it); the ordinary use of stone axes and other chopping tools of several types. All of these details of life were innovations, and were things which seem to have been completely unknown to the Paleo-Indian peoples. Each item on this list represents an invention or a series of inventions, a gain by mankind in efforts to make a better and more secure living from the world about. All of these new methods in making a living may have been invented in the old world and carried here by new immigrants; they may have originated here, but they were also invented at nearly the same time in several parts of Europe and Asia. Regardless of their origin, they are good examples of the ancient roles of invention and innovation in improvement of the lot of man. In later Archaic times,



These tools come from the DeTurk Site at Neversink Station, Berks County. All were chipped from Quartzite which the Indians obtained from the mountain slopes at Sallyanne Furnace, Newmanstown, and from the Welsh Mountains in Lancaster County. No. 1-3 are spearpoints, the bases of which were dulled by chipping a blunt edge which would not cut the cords lashing the point to a spearshaft. No. 4-6 are knives with edges worn by cutting and skinning. No. 7 is an adze blade, one of the two oldest ground stone tools found in Pennsylvania. No. 8-9 are choppers, probably used in butchering game. No. 10-14 are scrapers.

American men made other important advances, which included effective fishing methods, the use of river clams and ocean shell-fish as food, trapping devices, and a special type of hunting tool, the spear-thrower, which I shall discuss later.

We now recognize two periods within the Archaic Epoch, the Early and Lake Archaic Periods. It is very likely that these should be divided up into a great many separate times, since we know relatively little of these remote ages and are only beginning to glimpse the great variety of culture types and tool forms which were the product of Archaic man. In early Archaic times, the hunting tools which survive are heavy spearpoints which were chipped from many different stones, some of them flints and most of them coarse materials, even river pebbles. They are always crudely formed, as compared to earlier and later tools, and they usually have a tang for lashing to the shaft. The distinctive thing about the Early Archaic spearpoint is the lack of any notching for the lashings; these spears have straight or tapered stems.

The other ordinary tool of Early Archaic man was the chopper, a sort of cleaver or heavy knife about as large as a man's hand, probably used in butchering game. Choppers are usually very crude, and were, ordinarily, crudely chipped from coarse-textured stones rather than from flint. They were the ancestors of all later stone axes. Scrapers or beveled tools

are not common in most sites of this age, and they are most notable for their crude workmanship. Sites of this period are as yet poorly known, and are all believed to be more than six thousand years old. Early Archaic tools are remarkably clumsy and poorly made as compared to the earlier implements of Paleo-Indian times. These people had made one important advance in stone technology, however; they shaped hatchet blades from hard shale and granite by battering away the surface of the rock with a cobblestone until it was of the desired form, and then smoothed the surface and sharpened the edge by grinding on a whetstone. The earliest of these hatchet-blades were probably improved types of the rough choppers, and they were probably most useful in dismembering game. The earliest grinding stones and pestles, apparently used in making flour from acorns and other seeds, also appear at this time.

The Late Archaic Indians

The Late Archaic Period is believed to have begun slightly more than five thousand years ago and to have lasted until about three thousand years ago. Earlier than this, people were not numerous in North America, and the relics of their existance are not abundant, but the Late Archaic peoples seem to have been the first really successful and populous citizens of our area. Spearpoints of this period are more numerous than all other kinds put together, and one is apt to be found on any field or in any garden in the state. The vast majority of the campsites from which we collect Indian relics are of this age. The tools of this period are greatly varied, and most of the ordinary types of relics which are familiar to us are really the particular tool types of these times. The spearpoints range from very small to very large, but they all are characterized by a tang of some form or other which has crude, broad notches or constrictions to receive the lashings which fastened the flint tip to the spear-shaft. The majority of them were not used on lances (stabbing spears) but rather on javelins which were flung with the aid of a special hunting tool, the spear-thrower, which is described later. The ordinary tomahawk of our collections, the axe with a groove to hold the handle, was the common woodsman's axe of this period, and was apparently not used in earlier or later times. Most of the stone pestles, the so-called "corn grinders," belong in this period, and were used for crushing acorns, not corn, into flour.

The man of Late Archaic times used every food resource which he could find, and was a hunter, trapper, fisherman, and collector of wild plant foods. In western Pennsylvania he sometimes dug river clams, but he apparently did not use shellfish in more easterly areas. His burials and the skeletons of his dogs have been found and studied in large numbers; I have already described his bones as identical with later Indians, and his dog deserves more complete discussion in a somewhat later section of this paper. I do not want to describe all of his tools in detail, but should mention the most important of the hunter's implements and indicate how they were used.

An Archaic Hunting Tool—The Spearthrower

In Archaic times, our Indians had not yet learned to use the bow, and the lance or stabbing spear was no longer the usual hunting tool as it had been in Paleo-Indian times. Instead, the Archaic hunter killed his game with a light javelin, which was propelled by a lever-like tool, the spearthrower. This tool is somewhat difficult to explain, because we use nothing that in any way resembles it, and its mechanical principles are not familiar to the ordinary person. Nevertheless, it was at one time an

important and ordinary implement for hurling spears, used by many peoples of the world. It was the weapon which Aztec warriors used against Spanish soldiers during the conquest of Mexico. The spear-thrower may still be seen in use today among Eskimo and among the aborigines of central Australia.

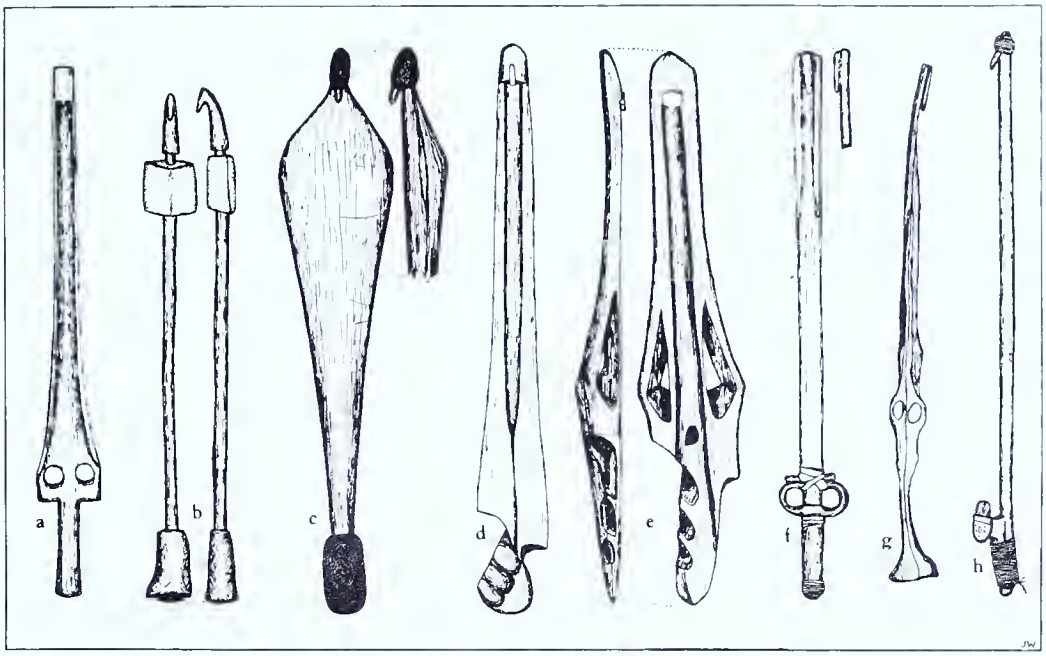
The spearthrower is a short bar of wood, about two feet long, with a handle at one end and a hook at the other. The hook fits into a socket at the back end of the spear shaft, and the spear is thrown by slinging it from this hook. The spearthrower has several consequences in throwing spears: it lengthens the arm by about two feet, vastly increasing the length of the arc and the velocity by which the spear is thrown; it magnifies the turn of the wrist in throwing a spear; it permits all the thrust to be delivered to the butt of the spear, rather than to the middle of the shaft (as in hand-throwing), so that less force is lost; it permits adding weights to the hook-end of the spearthrower, so that this lever can be swung with great momentum, somewhat like a golf club. Modern primitives who use the spearthrower, Eskimo and Australian, handle the tool with great accuracy and skill, and are able to hurl a spear with tremendous force by this device, enough to drive a spear quite through a kangaroo or bury a harpoon deeply in a seal.

Archaic spearthrowers of the eastern United States are known only from harder parts of the tools which have survived, and the wooden shafts have long since rotted away. However, these hard parts, stone weights and antler handles and hooks, have been found together in graves many times, with their holes lined up as they were set on a wooden rod. A great variety of stone weights for spearthrowers are found; the commonest, called a "bannerstone," resembles a double-bitted steel axe, with a drilled shaft hole. Bannerstones were used only during the Late Archaic Period, and other types of weights, especially those called "birdstones," were used in somewhat later times. The bow did not appear in this country until a much later date, probably not more than two thousand years ago.

The Indian Dog

Indian dogs of the Archaic Epoch were exactly like those kept by Indians in historic times and seen and described by our ancestors: these breeds are now, however, completely extinct. They were small wolf-like animals, ranging in size from that of a beagle to that of a fox. They did not bark like our dogs, but howled in wolf fashion. Our forefathers thought they were merely a domesticated fox or coyote, but the bones of these dogs prove that they did not originate from any American fox or wolf but were a true dog of primitive type which had originated in Asia. They were most closely related to the wolves of Asia, and the skeletons almost never show any evidence of cross-breeding with American foxes. The Indian dog closely resembled the Dingo of Australia or the primitive dog of the Andaman Islands of southern Asia, and was brought here more than five thousand years ago. Neither was it at all closely related to the Eskimo husky or malemute, or to the Siberian dog of the Alaskan Eskimo; these are much more advanced and specialized breeds. Unlike the Indian dog, the Eskimo dogs do frequently breed with wolves, and are much more courageous, aggressive, and useful dogs than were the Indian breeds. The Indian dog was a half-wild scavenger who was completely dependent upon humans for food and survival.

Indian dogs were kept in large numbers during Archaic times, and do not seem to have been so numerous in later times. However, at the time of the first white explorations,



Spearthrowers from various times and places. "A" is a Tarascan spearthrower from Mexico; "B" is a reconstruction of a Late Archaic specimen of the eastern United States; "C" is a paddle-shaped wooden thrower from Australia; "D" is a northern Alaskan Eskimo specimen; "E" is an Eskimo thrower, more than 500 years old; "F" is from Arizona; "G" is from Florida; "H" is from coastal Peru.

the Huron of Ontario kept huge numbers of dogs; these people formed such a dense population that they had nearly exterminated the deer and other game of their area, and the dog was their major source of meat. As far as we know from early accounts and from the archeology, the Indian dog was kept for only a few purposes. Most important, dogs were eaten, and this was probably their main value. They were also kept as scavengers, to clean up garbage and excrement about the camp. They were of some value as watchdogs, to set up a howl when prowlers appeared. They were apparently of almost no value in hunting; they lacked the bred-in abilities of a good field dog, and they were kept by people who had never developed methods for hunting with dogs. They were not fed meat from the chase, but lived on garbage, mice and such small critters, and fish. At times they seem to have fed entirely on fish, and, in excavating Indian sites, we frequently find dog manure preserved; it is made up almost entirely of partly-digested fish bones. We believe that dogs were not kept as pets, but as scavengers, as an extra source of meat, and as a food reserve to be eaten in famine times.

The Transition Between Archaic and Woodland Times

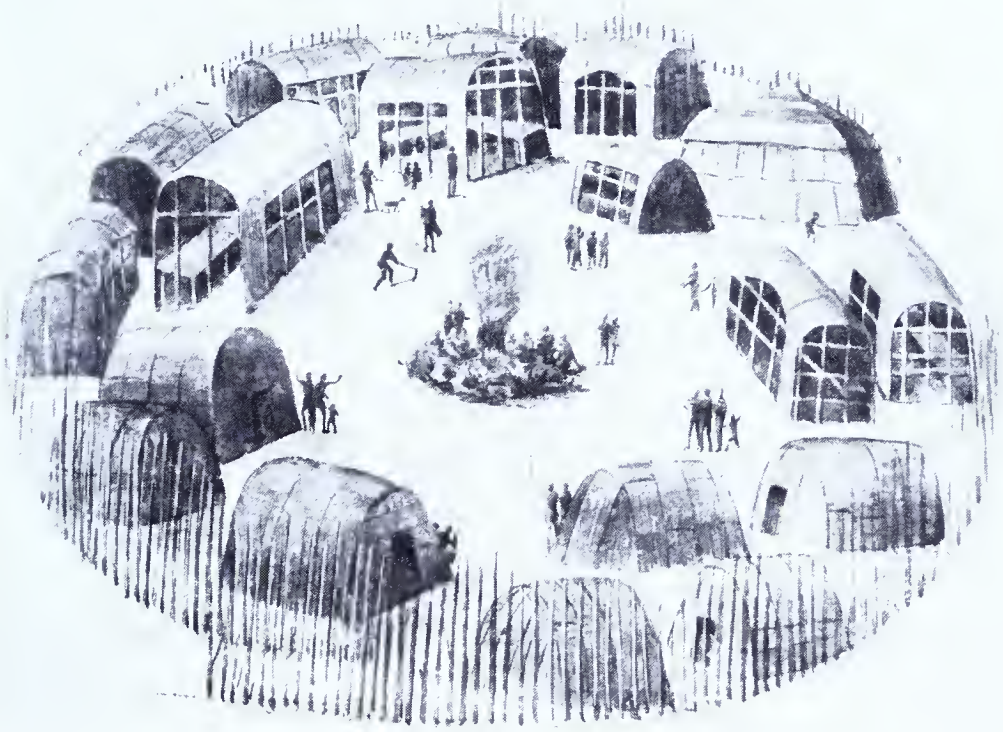
About three thousand years ago, drastic changes in Indian ways of life occurred in all parts of the East. During this Transitional Period in Pennsylvania, Indians lived mostly upon the rivers, apparently taking up an intensive canoe-life. They made very distinctive tools which can scarcely be mistaken for those of any other age. Flint spearpoints are of several broad-bladed forms, and only a few other forms of flint knives and scrapers were used. These are the earliest sites in which large numbers of notched-pebble net sinkers are found, suggesting the first general use of fishing nets. Almost none of the stone tool shapes of earlier times were

still in use. Grooved axes were no longer made, but flat adze blades of granite were apparently used in making dug-out canoes. For the first time in America, cooking vessels were in use. These were not made of pottery, but were carved from blocks of soapstone; broken pieces of the soapstone kettles are found in abundance on larger sites of the Transitional Period. The kettles were rectangular, box-like vessels with flat bottoms and a lug or handle at each end. Pieces from broken kettles were cut into beads and were made into weights for the spearthrower. These weights are rectangular slabs of stone with two or four holes drilled through them, or four notches sawed into the edges, and were lashed to a flat wooden spearthrower, instead of having a shaft hole for a round rod as did the earlier bannerstone. The sites of this age are almost always on the shore of a large stream, and are usually littered with flint chips which are thinner and larger than those of any other times, with net-sinkers made by knocking notches into the ends of a pebble, and often with broken pieces of soapstone kettles. Canoe-anchors (large notched boulders) and boulders with cup-shaped holes worked all over their surfaces are also found on these sites. The soapstone was quarried from an outcrop near Christiana, Lancaster County, and most of the flint used in the Susquehanna Valley during this period came from Caledonia, Franklin County.

Farmers of the Woodland Epoch

During the Transitional Period, our Indians apparently gave up Archaic hunting patterns, in which men cruised the hills and countryside on foot, and they began to follow the rivers for fish, migratory wildfowl, and river-front game. In all later times they continued to inhabit the river valleys, rarely settling away from main streams and making only hunting-trips into the back-country. Men of Transitional times depended upon their canoes to carry cumbersome household goods, kettles, nets, and flint supplies over vast distances. Men of Archaic and Paleo-Indian times could not carry such bulky paraphernalia, and traveled with only axe, clothing, and hunting tools. None of these peoples seem to have ever built houses or tarried long in one place. Almost three thousand years ago, however, farming began, and even in its first stages agriculture seems to have completely modified Indian life. It made sedentary life possible, it led to house-building and town-growth, and made possible much larger populations by lessening the frequency and intensity of starvation. We know very little yet of the early stages of agriculture in the East, but have enough information to outline the growing importance of farming, the introduction of new and improved crop plants, and the constantly increasing effects of farming on everyday life.

Indian agriculture was axe and hoe farming. Mature, full-grown hardwood forest, especially walnut and hickory on the river flats, was cleared with the axe, and yielded fertile, weed-free fields. All cultivation was by scraping with the hoe, and crops were planted in hills as we sometimes plant corn, not broadcast or rowed. Houses and storage structures were built adjacent to the fields, and gardens became the focus of settlement, the place where the hunter lived even though he might travel more than a hundred miles a week in pursuit of game. Farming was entirely the affair of women, probably because women had first discovered and developed crop plants, and field-grown foods quickly became the staples and dietary main-stays of the community.



The oldest painting of an Indian town in the eastern United States, from John White's original Virginia watercolor of about 1588 in the British Museum.

A Brief History Of the Indian Hunter

PART III

By John Witthoft

IN EARLY Woodland times slightly before 500 B. C., Indians lived in single households along our rivers, each family in a single farmstead surrounded by its fields. We know very little of these settlements because each one was a mere single hut, and only a few of these hut-sites have been excavated. In Ohio and other places, they frequently raised burial-mounds over these houses, so that the Adena Culture of that area is much better-known. In Pennsylvania, the houses of this period were sometimes dug below ground level, probably for greater warmth in the winter. There are few relics found at sites of this age, mainly because the Indians were scattered in so many tiny family groups, and each site represents so few people.

The crop-plants of this period have not yet been found in Pennsylvania

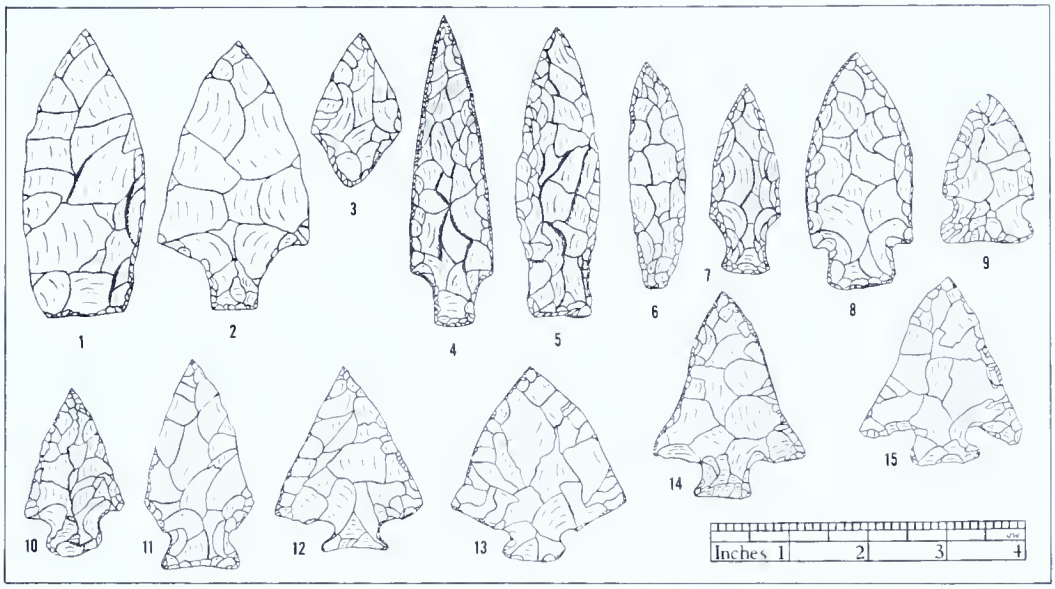
sites, but their charred remains have been found in Ohio sites of the same age, and dried materials are known from Kentucky rock-shelters which were occupied at the same time. The most important plant was the cultivated sunflower, represented by seeds and heads which closely resemble the so-called Russian Sunflowers of our seed catalogs. The sunflower is of interest for several reasons. It is an important crop plant, one of the best food-oil sources of the plant world, and is an extremely rich and nutritious food. It is also the only crop plant of modern commerce which had its origin in the eastern United States, which was bred from a wild plant of little utility within this region. Corn and beans seem to have been totally unknown to our earlier farmers, but a number of other grain-plants of local botanical origin and of types no longer grown have been found in Kentucky sites of Early Woodland age. Most of these are pigweeds and Amaranths, with seeds many times larger than wild forms. These may have been also grown for a time by later Indians, but the seed was long ago lost. The sunflowers, on the contrary, were grown by all later Indians; all of the modern varieties of sunflower which we grow, and which we know as weeds in the west, originated in seed-stocks which our ancestors got from Indians of the eastern United States. Farming in early times in the United States seems to have been of local origin, with cultivated plant varieties developed from local wild plants. Later, more productive plants, such as maize and beans, were brought in from tropical America and came to largely replace the old local crops.

Apparently tobacco was also grown in Early Woodland times, for it has been found in one Kentucky rock shelter with objects of this age, and large tubular pipes of stone are among the commonplace items of the Adena culture of Ohio and Pennsylvania and New York sites of the same age. These tubes, generally made of stone from Portsmouth, Ohio, are probably the world's oldest smoking pipes. The tobacco used in them was not the tobacco we use, which came from central America, but a local species which is still grown by a few Indian communities. This tobacco of our area, *Nicotiana rustica,* is not a wild plant, but is known only in cultivation and its wild ancestor has never been identified.

Other tools of Early Woodland times in Pennsylvania include narrow stemmed spearpoints, adze and hatchet blades, bar-weights used on the spearthrower (many of them representing birds), and pottery formed crudely from clay and fired barely hard enough to cook in. The pots of this period were round-bottomed, bag-shaped vessels, in Pennsylvania; flower-pot shaped vessels with a flat base were made in Ohio. Apparently the appearance of cooking vessels during Transitional times had represented the introduction of new cooking methods, and in all later times, Indians seemed inclined to boil most of their foods into soups and stews.

MIDDLE WOODLAND FARMERS

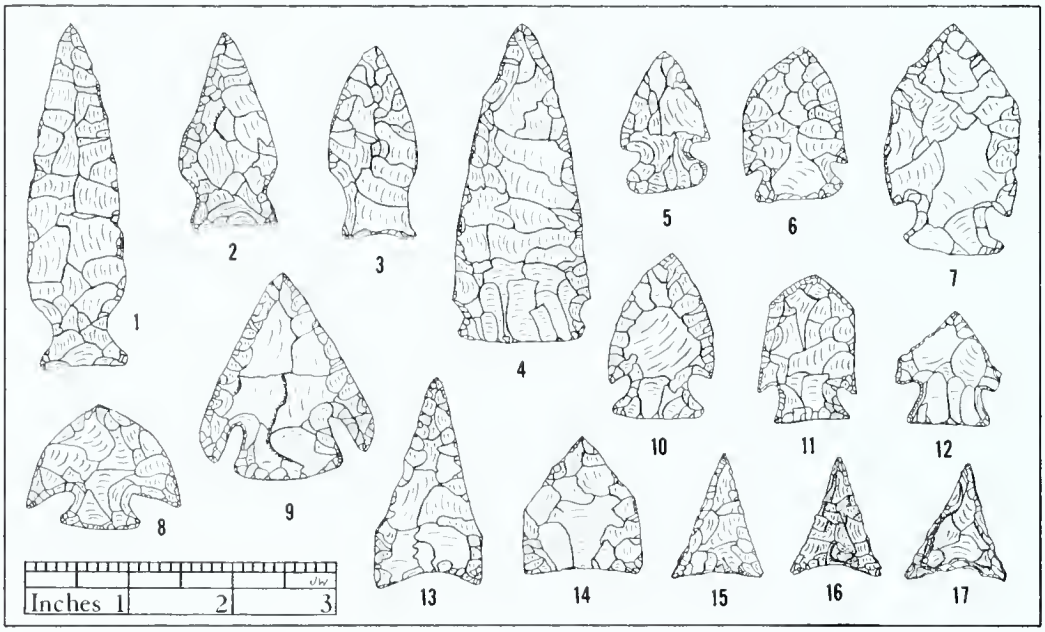
In somewhat later times, after 500 B. C., the general patterns of Indian life continued much as they had been, except that many minor changes and improvements in the arts of life can be detected. Spearpoints are smaller and more finely chipped, and are generally very delicately notched and often sharply barbed. Spearthrower weights are not very evident in most sites, and disappear completely during Middle Woodland times; at the same time, small flint points of simple forms first appear, and we believe that the bow and arrow first appeared on our scene during these times. The same farmhouse style of settlement seems to have continued, at least in Pennsylvania, and sites



Susquehanna Valley spearpoints of the Early Archaic Period (1-3), Late Archaic Period (4-10) and Transitional Period (11-15), drawn to show chipping patterns.

are difficult to locate and study. Charred corn has been found in sites of this period in other states, but it is so poorly in evidence that it could not yet have attained the primary importance that it held as a grain in later times. Gourds are first identified with certainty in this period, although they were probably also grown earlier. Pottery fragments are much more numerous than in earlier sites, and pipes are quite as abundant, but occur in several shapes. They were made both from pottery and stone, and are of elbow forms and other more elaborate patterns.

With the close of Middle Woodland times, sometime between 300 A. D. and 700 A. D., Indian life in our area was much like that of the last surviving Indians, except that further effects of new resources were to be seen. Populations were not yet of large size, and town life had not begun, although maize, beans, and pumpkins, the great plants of local Indian agriculture, were being grown. The bow had replaced earlier hunting tools, a sedentary house-life was well-established, hunting had become a subsidiary part of the economy, and the seeds of a very different sort of civilization than that of the hunter had been planted. In the Illinois Valley, large village-sites of this period mark the spots where fairly dense town-communities were settled on rich land. In the Ohio and Sciota, communities of the same age were little hamlets, by no means as sizable as those down-river. In Pennsylvania, few sites of Middle Woodland times seem to represent the occupants of more than two or three houses, and our Indians were country cousins to peoples of the Mississippi Valley.



Susquehanna Valley spearpoints of the Early Woodland Period (1 - 3) and Middle Woodland Period (4 - 14), and arrowpoints of the Late Woodland Period (15 - 17).

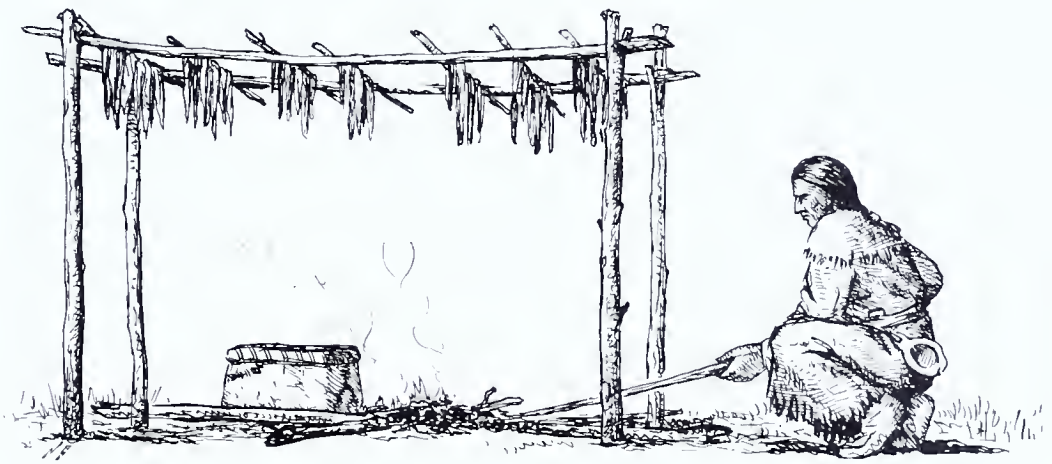
FARMING VILLAGES OF THE LATE WOODLAND PERIOD

Sites of the Late Woodland Period, which was the last stage proceeding European settlement, are everywhere in the East and Plains marked by an abundance of pottery fragments and by having only one shape of stone arrowhead, a simple small triangle without notches or stem. The bow had completely replaced the spear-thrower, and it is very likely that only the small triangular arrowhead was ever used with the bow in our area, and that all other shapes had had some other use. The only chopping tools were simple celts and adzes. Scrapers and planing tools are crudely beveled chips of flint. Knives are leaf-shaped chipped flint forms (the point was set in the handle, and the round base was the cutting edge.) Pipes were quite abundant, and occurred in a huge variety of forms in stone, pottery, antler, and wood. Hoes were sometimes chipped from shale, sometimes shaped from the deer shoulder-blade or a slice of elk antler. Netsinkers, made by notching the side edges of a thick pebble, hammerstones, anvil stones, grinding slabs, and pebbles with pitted sides (of unknown use) are very common. Some sites also have awls, beads, needles, and similar tools cut from bone. Except for the tools which I have listed, almost no other kinds of relics were used at all in this period; Late Woodland sites lack almost every type of tool that the average person thinks of as an Indian relic. The vast majority of the relics from our fields are much more ancient, and in fact most of them date from the Archaic Epoch.

Almost all Late Woodland sites are on river flats, generally on

slightly elevated spots, but almost always on very low ground. There are exceptions in southwestern Pennsylvania and some other areas, but these are usually in regions of peculiar topography. Most of the sites represent small hamlets, probably made up of a half-dozen houses clustered on a high spot in the middle of the Indian fields, and usually very close to the river bank. Farm crops were grown in large quantities, and we find charred maize and beans, and sometimes pumpkin fragments, in practically every Late Woodland site where we dig. It is almost impossible to miss the charred corn in sites of this age, whereas it can scarcely be found in earlier sites. We also invariably find bones of deer, bear, turkey, wildfowl, small animals, dogs, and the shells of river mussels in these sites; animal foods do not appear to have had nearly the importance of cultivated plant foods in this period, however, and arrowpoints are not abundant as compared to the frequence of spearpoints in earlier sites.

Houses in this period were round or oval structures, made by driving posts into the ground for joists, framing rafters over them, and covering the whole structure with barksheets or mats in shingle-fashion. Very few of these settlements were fortified by a ring-palisade of logs driven into the ground, but such town-walls sometimes occur as evidence of warfare. By Late Woodland times, Pennsylvania Indians had made vast gains in population, economy, and security over that known to their forefathers in ancient times of hunting economy. However, they were still rustic provincials compared to their relatives in the Mississippi Valley, where the same processes of increased food-production and growth of population had progressed much further. In fact, even in Ontario and New York, Indian communities of much larger size and more intensive agriculture were ordinary at this time. In the Ohio and Illinois valleys, and in southern Ontario, big peasant villages of forty or fifty houses, occupied by perhaps five hundred persons, and often fortified, were surrounded by hundreds of acres of tilled ground. On the Mississippi, huge walled cities, some of them covering more than sixty acres, were built on the huge stoneless river bottoms, surrounded by vast expanses of cornfields and gardens. We know of one such site in Indiana, one in Illinois, and several in Missouri, but the really notable examples are in Arkansas and nearby states, in the valleys of the Mississippi and the Red. Here peoples lived a stable urban life, with huge crop production, vast fisheries, almost no hunting, and sporadic warfare.



The Delaware Indian New Year's ritual, held in a log ceremonial building as painted by Earnest Spybuck in 1912.

A Brief History of the Indian Hunter

By John Witthoft

PART IV

THE COMING OF THE WHITE MAN

This was the complexion of aboriginal America when the first whites came. Farming was supreme from Florida to Massachusetts, and west to the heads of the Missouri and into the southwestern desert. The bow was everywhere the major tool of the hunter and warrior, hunting was everywhere an economic pursuit of very secondary importance, and warfare was sporadic, poorly organized, and generally indecisive. The eastern United States was a prosperous, well-populated, progressive, and peaceful countryside. We are not certain that any white explorer ever saw this pattern of native life while it was intact; if any did, he certainly left no record of it, for all that we know of such matters comes from archeology, not a scrap of it from history. At the time of the discovery of America, the centers of native life in the present United States were on the great waterways, and all of the huge settlements of the interior seem to have been abandoned before any white man set eyes on them, before the first glass bead or brass trinket came to these towns by trade. Even though no white man had trod the walks and plazas of these towns, he had brought death to the communities and their people.

Had he been there to watch, he would have seen native civilization dissolve as frost before the sun, even as it did in regions where whites had over-run the Indian settlements. All the Indian towns of western Pennsylvania, Ohio, West Virginia, and Kentucky, all the large cities of the Mississippi, the towns of the Illinois, the metropoli of the Tennessee Valley, and the huge walled cities of the Red had vanished completely before white observers appeared.

In almost every case it is nearly impossible to even decide who, among the Indian tribal remnants found later in these regions, were the inhabitants of these elder stable communities, and who were newcomers who had fled from another section.

Despite what I have said before about the rigors of native life, that represented the lot of man at the mercy of nature, and that was nothing to what was to come. Despite the fact that the prehistoric Indian buried half his children as infants, had his teeth worn out at thirty, and rarely lived to be forty, he was a part of an increasing population, he lived a short life and a worthy one, and he was subject to few infectious diseases. In Seneca tradition, the Devil had given the white man Columbus four objects, four symbols, to give the Indian. These were the bottle, the violin, a deck of cards, and a rotten human thighbone, representing the destruction of integrity by liquor, the destruction of values by frivolity, the destruction of subsistance by fraud, and the destruction of the people by disease.

Long before there were any seaside white settlements in North America, there was extensive commerce between seamen and Indians on all shores of the Atlantic and Caribbean. Indian populations along these shores were never large, for the country was poor; Indians there were all but wiped out by the time settlers came. But Indians from the nearby interior were also drawn to the coast for trade, and they and the coastal peoples were the thin population fringes of the prosperous interior of the continent. All of the microscopic parasites of humans, which had been collected together from all parts of the known world into Europe, were brought to these shores, and new diseases stalked faster than man could walk into the interior of the continent. Typhoid, diphtheria, colds, influenza, measles, chicken pox, whooping cough, tuberculosis, yellow fever, scarlet fever, and other strep infections, gonorrhoea, pox (syphilis), and small pox were diseases that had never been in the New World before. They were now among populations where no one had any immunity to them, where crowded town life favored rapid contagion. Great epidemics and pandemics of these diseases are believed to have been the causes for destruction of whole communities, depopulation of whole regions, and vast decreases in native population everywhere in the yet-unexplored interior of the continent. The early pandemics are believed to have run their course prior to 1600 A. D.; later epidemics probably never approached their severity, although some, like the 1910 smallpox outbreak among the Oklahoma Seminole, nearly wiped out whole tribes.

In every area, the earliest historic sources from the frontier period present us with Indians who had already been long accustomed to face-to-face contact with whites, who were a mere remnant of earlier populations, and whose whole way of life had been vastly distorted and damaged by the economic and physical effects of European civilization. We are gradually coming to know a great deal about Indian life in the Colonial Period, but this information is being derived from excavations of Indian

sites of this age, not from historic sources. We are becoming more and more aware that it is sheer folly to expect much reliable or significant information about Indian life from the sources of history; even where our forefathers knew anything of such matters, they neither cared or wrote. Not the historic documents, but the objects from Indian house-sites of the seventeenth century, the guns from the graves, the pox-riddled skeletons, give us a reliable picture of the past. I am here concerned mainly with the growth and development of native culture, and do not want to take much space to discuss its rapid erosion and collapse before the frontier and on the frontier. Since this is one of the most unpleasant and disagreeable topics in American history, I generally feel that the less said about the true nature and details of the frontier, the better. Let the historians keep their preposterous fairy-tales of the "empire builders," and let our modern Indian citizens forget their whole traditional knowledge of the unbelievable horrors which came with the inexorable march of European culture across the American continent.

The Three Stages In European Conquest of Eastern North America

Actually, there were three distinct stages or phases in the white conquest of North America. The first, which I have just described as the biological phase, had as its agent the microb. The second, the commercial phase, had as its agent the Indian warrior. The third phase, the frontier, had as its agents the white borderer, trader, soldier, and settler. In the biological phase, Indian-white contacts were along the seacoast, small quantities of furs and European tools and trinkets changed hands, and sailors, lice, rats, fleas, and items of barter brought devastation by disease to the sparse coastal populations and indirectly to the large populations of the interior. Iron axes, glass beads, knives, and brass scrap of this phase was carried all over Pennsylvania and New York, and some trade goods of this early period are even found in central Ohio. This phase ended in the Northeast shortly after 1600 A. D., with the establishment of permanent trading posts and settlements along the Atlantic coast and in the valleys of the Saint Lawrence, the Hudson, the Delaware, and the Potomac. The biological phase of conquest had emptied the coastal regions for white settlements, and had so weakened the interior peoples that they were never able to push the whites out.

Just beyond the strip of land along the coasts which were actually settled by whites, peoples of the interior were able to pull themselves together and form a belt of Indian military power that long held white settlement east of the mountains. In the Northeast, there were three such nations or tribes, who formed a barrier between the white settlements and the western country; they were the Huron of Canada, the Five Nations of New York, and the Susquehannock of Pennsylvania. They formed large political alliances, they consolidated their total populations into a very few large fortified towns, and they became the major agents in the fur trade. They were so situated that they controlled all entries to the west, and every fur that came out of the great Interior Basin or central Canada passed through their hands. Ravished by disease, they still kept up their population and military power by absorbing the remnants of broken tribes from the east and by adopting huge numbers of captives taken in warfare. They began the systematic conquest of their western neighbors, and huge caravans of captives, loot, and fresh beaver hides from the rivers of the west poured into their towns. They became tre-

A GRAPH TO THE HISTORY OF THE EASTERN UNITED STATES

FEDERAL PERIOD	1776 - PRESENT	Replacement of Native Races & Cultures
COLONIAL PERIOD		Decimation of Native Populations
WOODLAND EPOCH 1,000 B.C - 1,550 A.D. — 'NEOLITHIC' TECHNOLOGICAL STAGE — PRODUCTIVE ECONOMY	LATE WOODLAND PERIOD 500 - 1,550 A.D.	Town Life Large Populations Decline of Hunting Incipient Warfare Intensive Farming Pressure Flint Chipping Provincialism, Little Travel & Trade Simple Burial Ritual
	MIDDLE WOODLAND PERIOD 500 B.C. - 500 A.D.	Village Life Elaborated Burial Ritual First Maize Intra-Continental Travel & Trade Introduction of the Bow Arctic - Asiatic Cultural Influences Expert Flint Chipping
	EARLY WOODLAND PERIOD 1,000 - 500 B.C.	Houses Sedentary Life Distant Trade Pottery & Pipes Pioneer Agriculture Sunflower Amaranthus Tobacco
TRANSITIONAL PERIOD	1,500-1,000 B.C.	Intensive Fisheries Carved Soapstone Kettles Canoe Life Meat Stewing First Pottery
ARCHAIC EPOCH 6,000 - 1,500 B.C. — 'MESOLITHIC' TECHNOLOGICAL STAGE — DIVERSIFIED ECONOMY	LATE ARCHAIC PERIOD 4,000 - 1,500 B.C.	Spearthrower & Javelin River Travel Shellfish Eaten Axes Forged Copper Tools
	EARLY ARCHAIC PERIOD 6,000 - 4,000 B.C.	Hunting, Fishing, Gathering Nomadic Life Within Family Territory Woven Fabrics & Sandals Chipped Flint & Stone Tools Pecked & Polished Stone Tools Baskets & Bark Vessels Acorn Porridge Boiling in Barks by Heated Stones Chopping Tools Dog Domesticated
PALEO-INDIAN EPOCH 16,000 - 6,000 B.C. — 'UPPER PALEOLITHIC' TECHNOLOGICAL STAGE — HUNTING ECONOMY	LATE PALEO-INDIAN PERIOD 9,000 - 6,000 B.C.	Big Game Hunting Lance, or Stabbing Spear Chipped Flint Tools Ground Bone Tools Fluted Spearpoints Spear Tang-edges Ground
	MIDDLE PALEO-INDIAN PERIOD	Highly Nomadic Life Meat Roasting Tailored Skin Clothing Flint 'Blades'
	EARLY PALEO-INDIAN PERIOD	

VERTICAL SCALE IN YEARS

Dates are approximate and to some degree conjectural. Other statements represent varying degrees of probability. Time has been quantified in this chart to stress historical perspective and to facilitate critical reading.

John Wittholt Aug 8, 1954

mendously wealthy by native standards, were able to buy any and all of the tools and luxury goods which Europe had to offer, and quickly became completely Europeanized in technology, not in any other respects. By 1640 A. D. they no longer made pottery in any quantity but did their cooking in brass kettles; they no longer made arrowheads by this date, and were completely armed with muskets. These guns were turned upon peoples to the west, and by 1640 the upper Ohio and its tributaries as far west as the Scioto had been swept clean of all other Indians by Five Nations and Susquehannock war parties, and had become a mere "beaver-hunting ground." Before 1700, these war parties had swept clean to the Illinois and the Tennessee. These people had, despite their wishes, become mere military agents of European commerce. Traders did not come to their towns, but they brought their furs down to port settlements, and carried back their guns, powder and lead, swords, daggers, axes, silverware, rum, linen shirts, and brass kettles. Few white men even set foot within their territories. At the same time, the three tribes who controlled the commerce of the west were locked in combat among themselves for exclusive domination of the frontier. The Five Nations defeated and destroyed the Huron in 1648, and later destroyed the Susquehannock in 1675. By a series of accidents and changes in Russian and oriental taste, the bottom fell out of the European fur mart about 1675, and no Indians anywhere ever again achieved the wealth and power that the Five Nations had held at that time. The beaver had also been nearly exterminated in all areas within the reach of our Indians. Thus the great empty western tracks, the real "bloody ground" of American history, lost much of their previous importance, and they began to be settled by small, semi-sedentary groups of Indians of very diverse origins. Some of them were shattered remnants of once-important tribes who had long ago been torn loose from their moorings; Delaware, Munsee, Shawnee, Wyandot, Miami, and Illinois. Others were Five Nations splinter-groups, dissatisfied peoples from New York who moved into new country, some of them because they favored French rather than English interests in the growing struggle for colonial power. These pro-French Iroquois gradually came to be called the Mingo, a word more generally applied as a name for any Five Nations language. Meantime, in the middle seventeenth century, the French-British struggle of the Seven Year's War became localized in the Ohio, and once military penetration of this region had been effected, the whole trans-Allegheny realm was open to the flood of whites who carried the third phase of conquest west of the mountains, and thereby to the Pacific coast.

A frontier is not a boundary of settlement, but a boundary between two nations. Our frontiers were like the marches of Europe, regions at the periphery of white settlement and beyond the law and control of provincial or state governments; and at the weakest margin of Indian settlement, where the law and power of Indian nations could scarcely be enforced. Such tracts drew the outlawed, the lawless, the ambitious, the ne'er-do-well, and the adventurous from all directions. The violence of the border insured that it kept moving westward, as weaker Indian communities on the west gave way and as stronger white communities on the east came to extend their law into the frontier. There was never any such thing as "frontier law" in Pennsylvania, since any area within the provincial grant was subject to a highly refined legal system (and court and office structure), but there were abundant violations of

this law in marginal areas where enforcement was difficult. Indians concerned with injustices in Pennsylvania ordinarily went to the courts or the governor about them, and often received better justice than is accorded natives in Arizona or Alaska today. An American frontier, in Pennsylvania as elsewhere, is a tract beyond the reach of law-enforcement agencies, and it straddles the limits agreed upon by the nations on each side. So-called "frontier law" is actually communal violation of existing statutes which are difficult to enforce in sparsely-settled country.

Once the Allegheny was broached, America had frontiers from then until the present time. The Frontier became the mechanism by which Europe finally overran and consolidated aboriginal America, as the infantry consolidate territory already neutralized by more remote agents of warfare. Frontiers can be especially destructive of human lives, dignity, and values, and their toll is not limited to primitives, for they also bring vast destruction to whites. Their processes seem to be completely inevitable, mechanistic, and inhuman; bloodshed and fraud are impersonal and unemotional. Those of us who have observed processes and behavior on modern frontiers have been sickened by what we there learn of human nature and European personality. Lest this be considered a heretical opinion, let me point out that untold generations of missionaries have been drawn to the frontier by the vast evil apparent there, and by their desire to salvage the humanity of primitives caught on frontiers; their considered opinions are usually very similar to mine. The frontier was the last step in the closing of one of the more horrible traps that nature and fate have often sprung on a native society and culture. The Indian, like the Australian and the Eskimo, may not have been completely destroyed as a human variety or race by this series of events, but he has long been doomed as a people and civilization. Mere vestiges of his society and culture have survived to the present day.

CONCLUSION

Thus the actual history of the Indian represents a long, slow development of culture, growth of population, and striving toward the fulfillment of human potential, ended in catastrophe caused by factors beyond the understanding of either white or Indian in those times. This history is a study in tragedy rather than in injustice, romance, or empire; the sentimental interpretations so often met with, which stress those three elements, are remote indeed from a true picture of Indian history. The growth of Indian culture, the step by step gain in the arts of life and in control over nature, is much like the achievement made by many other peoples of the world, and the end of Indian culture is much like that of many other primitive peoples of the world, caught in similar traps by nature and alien societies. From the scholarly viewpoint, we are much more interested in what the Indian accomplished and in the steps by which he made gains, than we are in the circumstances of the death of his culture. We may, however, hope and trust that we will continue to build even better American cultures on the same ground as the ancient people, and that in humility and wisdom we may be able to avoid similar and more terrible traps in the future.

. . . *The End*